

RTCA Special Committee 186, Working Group 3

ADS-B 1090 MOPS, Revision A

Meeting #12

Correction of a Typographical Error

Presented by William Harman

SUMMARY

Recent discussion with member of the UAT working group revealed a typographical error in the MOPS (DO-260) regarding aircraft antenna gain as installed. This paper provides the corrected material.

Correction of a Typographical Error

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Background. I received a call from Rich Jennings and others working on the UAT MOPS concerning some material they are putting in UAT as a copy of material in the Extended Squitter MOPS. In the discussion, we realized that this material was originally in the TCAS MOPS, and from which it was copied into the Extended Squitter MOPS, but with some typographical errors.

Two corrections are needed in Section 3.3.4.5.2, page 637, Antenna Location Using Distance-Area Calculations. (1) Primes are used in a formula, but the primes are typed in the wrong places, and (2) A phrase was omitted.

Correction. I propose the following changes to correct this material.

(1) In the current formula in DO-260, replace G_2 -prime with G_2 and vice versa. Also replace G_3 -prime with G_3 and vice versa, resulting in the following equation:

$$\frac{A_1^2}{I^2 D_1^2} + \sum \frac{A_2^2 G_2'}{I^2 D_2^2 G_2} + \sum \frac{A_3 G_3'}{4p D_3^2 G_3} < 0.02$$

(2) In the 4th full sentence after the equation, add the following at the end of the sentence: “, and the antenna gain in the direction of the target is denoted G_2 and is dimensionless.”

Supporting Material. I might point out in passing that there is also a typo in this material as it appears in the TCAS MOPS. It's a different typo. The primes were omitted altogether. So when the material was put into DO-260, primes had to be added. The problem was that they were added in the wrong places. Before submitting the corrections above, I found the original material on which the TCAS MOPS material was based. This was a paper I had submitted to SC-147 on 2 January 1986.